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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/857,020

05/31/2001

Yasuhiro Shiraishi

Q64727

7655

7590

07/28/2004

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/857,020

Applicant(s)

YASUHIRO ET AL.

Examiner

Abbas I Abdulsalam

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☒ Claim(s) 8-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see # 10 filed 05/12/04, with respect to the rejection(s) of claim(s) 8-13 under U.S.C. (103) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Suzuki et al. (USPN 4833358).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suganuma (USPN 5767609) in view of Suzuki et al. (USPN 4833358).

Regarding claims 8, 11 and 13, Suganuma teaches a pulse generator (130), and discloses a drive state detecting circuit detecting the drive state of the ultrasonic motor, as well as a drive frequency (voltage) setting circuit controlling the frequency (or voltage) of signal for driving the ultrasonic motor. See the abstract. Suganuma further teaches that the pulse generator generates pulses in response to the speed of the rotor (100-1), and discloses a drive speed setting circuit (9) with respect to an amplifier (93) which determines and amplifies the difference between the voltage signal from the F/V converter and the reference voltage supply (92). See col. 16, lines 7-

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20. However, Suganuma does not teach determining a change in frequency with respect to the pulses. Suzuki on the other hand teaches frequency determination circuit includes an oscillating circuit, the output frequency of which is changed according to the output level of a pulse voltage converting circuit. See col. 3, lines 17-51 and Fig. 3.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Suganuma's driving device for ultrasonic motor to adapt Suzuki's frequency determination circuit along with a pulse voltage converting circuit for the purpose of determining the frequency change. One would have been motivated in view of the suggestion in Suzuki that frequency determination circuit along with a pulse voltage converting circuit equivalently determine a change in frequency with respect to pulses.

Regarding claims 9-10, Suganuma teaches drive voltage setting means (40) to ensure that the output voltage no longer increases or decreases when output voltage VM reaches a predetermined maximum or minimum value. See col. 23, lines 46-50.

Regarding claim 12, Suganuma teaches a drive frequency setting means (20) (Fig. 29) and discloses a pulse generator (130) sending a pulse signal of a frequency depending on speed feedback voltage.

***Allowable Subject Matter***

3. Claims 1-7 are allowed.

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4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

**Any response to this action should be mailed to:**

Commissioner of patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314**

Hand delivered responses should be brought to Crystal Park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.

Abbas Abdulsalam

Examiner

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July 20, 2004

  
**XIAO WU**  
**PRIMARY EXAMINER**